

The Era of International Space Station Research:

Discoveries and potential of an unprecedented laboratory in space

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The assembly of the International Space Station was completed in early 2011. Its largest research instrument, the Alpha Magnetic Spectrometer is planned for launch in late April. Unlike any previous laboratory in space, the ISS offers a long term platform where scientists can operate experiments rapidly after developing a new research question, and extend their experiments based on early results. This presentation will explain why having a laboratory in orbit is important for a wide variety of experiments that cannot be done on Earth. Some of the most important results from early experiments are already having impacts in areas such as healthcare, telemedicine, and disaster response. The coming decade of full utilization offers the promise of new understanding of the nature of physical and biological processes and even of matter itself.